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ULOGA KVATERNARNE PREVENCIJE U RADU LEKARA PRIMARNE ZDRAVSTVENE ZAŠTITE – PREGLED LITERATURE

Apstrakt: Koncept kvaternarne prevencije integrisan je 1999. godine u međunarodni *WONCA* rečnik kao preduzimanje postupaka da se identifikuju pacijenti u riziku od preteranog propisivanja lekova i dijagnostičkih procedura koje bi nanele više štete nego koristi. Cilj rada bio je da se utvrdi mesto i uloga kvaternarne prevencije u primarnoj zdravstvenoj zaštiti. Analizirani su radovi objavljeni do 31. 12. 2022. pretraživanjem *Medline*, *Pubmed*, *Cochrane Library*, *Scopus*, *Google Scholar*, *Science direct*, *Mendeley*, srpskih medicinskih časopisa, knjiga i strategija. Korišćeni su termini: kvaternarna prevencija, opšta medicina, preterana primena lekova i dijagnostičkih procedura. Ograničenje se odnosilo na radove napisane na srpskom i engleskom jeziku. Pretraživanje je vršeno od 1. 9. 2022. do 31. 12. 2022. *Preferred Reporting Items for Systematic Review* postulati su korišćeni za utvrđivanje valjanosti prikupljenih radova. Ukupno 1.899 radova je identifikovano. Nisu identifikovane metaanalize, sistematske preglede literature i randomizovane studije. Ukupno 194 je analizirano. Izdvojeno kao relevantno 36 dokumenata. Kvaternarna prevencija se u primarnoj zdravstvenoj zaštiti odnosi na prekomernu upotrebu radioloških i laboratorijskih pretraga, antibiotike, skrininge, individualni pristup pacijentu, dobru komunikaciju, oslanjanje na medicinu zasnovanu na dokazima, opterećenje u timovima izabраниh doktora i brz pristanak na zahteve pacijenata. To su bolesni pacijenti bez dijagnoze, zabrinuti za svoje zdravlje, sa funkcionalnim tegobama, psihosomatskim poremećajima i neuobičajenim ponašanjem tokom bolesti. Kvaternarna prevencija ima svoje mesto u skriningu raka dojke i prostate, imunizaciji, marketingu lekova u mentalnom zdravlju i osteoporozi, lečenju hipertenzije, predijabetesa

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i dislipidemija, programu privatnih zdravstvenih osiguranja i upotrebi dijagnostičke tehnologije visoke rezolucije. Kako bi se izbegle nepotrebne medicinske procedure potrebna je dosledna primena medicine zasnovane na dokazima.

Ključne reči: kvaternarna prevencija, medicina zasnovana na dokazima, etika, preventivna medicina, primarna zdravstvena zaštita

Uvod

Koncept kvaternarne prevencije integrisan je 1999. u međunarodni rečnik lekara opšte/porodične medicine Svetske organizacije porodične medicine (*WONCA*) i definisan je kao radnje koje se preduzimaju da se identifikuju pacijenti koji su u riziku od preteranog propisivanja lekova, da se zaštite od nove medicinske invazije i da im se predlažu etički prihvatljive intervencije¹. Koncept su predložili 1948. godine *Leavell i Clarke* i bio je baziran na nivoima prevencije sifilisa u svim svojim fazama, da bi se potom razvio na odnos lekar–pacijent². Termin je nastao 1986. god. u Belgiji, osnovao ga je *Marc Jamouille*, kompletirao ga je 1988. god. *Jacques Bury* i počeo je da se širi na *WONCA* kongresu u Hong Kongu 1995³.

Primordijalna prevencija podrazumeva određeni socijalno-ekonomski status države i stanovništva, nivo svesti društva, znanja, opremljenosti i delovanja sistema zdravstvene zaštite o štetnosti određenih faktora na opšte zdravstveno stanje stanovništva. Preventivne mere su podeljene na primarnu, sekundarnu i tercijarnu prevenciju. Poslednjih godina ovoj klasifikaciji dodat je termin kvaternarna prevencija. To su preduzete mere za zaštitu pojedinaca (osoba/pacijenata) od medicinskih intervencija koje mogu uzrokovati više štete nego koristi⁴.

U primarnoj prevenciji nema bolesti. Preventivne mere se odnose na zdrav stil života i vakcinaciju. U sekundarnoj postoje stanja koja su označena kao faktori rizika i kao takvi sporno je da li bi trebalo da budu sami po sebi bolesti jer se definišu proizvoljnim granicama u kontinuumu (hipertenzija, šećerna bolest, osteoporoza, hiperholesterolemija). Tu su i rani stadijumi bolesti otkriveni skriningom. U tom trenutku imamo pacijenta koji se oseća odlično osim što je ugrožen saznanjem o bolesti. Svrha sekundarne prevencije je da snizi faktore rizika i smanji neke od krajnjih ishoda ovih stanja kao što su infarkt miokarda, moždani udar ili koštani prelomi. Kritično posmatrajući lečenje hipertenzije je prevencija iako nema bolesti. Koncept faktora rizika je sasvim nov, ali je stekao široku popularnost u relativno kratkom vremenu⁵.

Većina pacijenata sa faktorima rizika nikada neće razviti komplikacije za koje postoji rizik. Bez obzira na to, mi takve osobe definišemo kao obolele od hroničnih bolesti ili ukoliko imaju više faktora rizika komorbiditetima. Ne bi trebalo da plašimo naše pacijente da je život sam po sebi faktor rizika za smrt kada je zapravo on

predispozicija za nju. Faktori rizika su relativni. Na primer, ne bi trebalo da lečimo hiperholesterolemiju samu po sebi kao faktor rizika ukoliko je ukupni rizik za kardiovaskularne bolesti nizak i obrnuto. Drugi primer sekundarne prevencije je skrining na karcinom prostate. Većina muškaraca sa PSA iznad 80 će imati karcinom, ali će samo nekoliko njih umreti zbog te bolesti^{6,7}.

Tercijerna prevencija je jedina tačka gde se sreću bolest i pacijentov osećaj bolesti. Primer može biti akutni infarkt miokarda. Pružanje pomoći pacijentu da upravlja neizvesnošću sa svim merama koje imamo pod uslovom da to ima smisla u skladu sa životnim okolnostima i voljom pacijenta.

Među četiri oblasti prevencije definisane na osnovu interakcije pacijenata i lekara kvatertarni nivo prevencije odnosi se na situaciju u kojoj se pacijent oseća bolesno ali doktor zaključuje da nije prisutna nikakva bolest. Kvaternarna prevencija su aktivnosti na zaštitu pojedinca od medicinskih intervencija koje bi izazvale više štete nego koristi⁸. WONCA poster sa konferencije u Pragu 2013. o kvaternarnoj prevenciji preveden je na nekoliko azijskih i evropskih jezika³ (Grafikon 1).

Grafikon 1. Odnos pacijent–doktor potiče od četiri vrste preventivnih aktivnosti.
Strelica pokazuje da P4 ima uticaja na sve oblike preventivnih aktivnosti

I Primarna prevencija Mere da se izbegne ili ukloni uzrok bolesti kod pojedinca ili populacije pre nego se pojavi. Uključuje promociju zdravlja i specifičnu zaštitu (npr. Imunizacija).	II Sekundarna prevencija Otkrivanje bolesti u ranim fazama, čime se olakšava izlečenje, smanjuje i sprečava širenje ili njihov dugoročni učinak (skrining, pronalaženje slučajeva i rana dijagnoza).
IV Kvaternarna prevencija Identifikacija pacijenata ili populacije u riziku od prekomerne medikacije, kako bi ih zaštitili od invazivnih medicinskih intervencija i obezbedili za njih procedure koje su etički prihvatljive.	III Tercijerna prevencija Aktivnosti za smanjenje hroničnih efekata zdravstvenog problema minimiziranjem funkcionalnog oštećenja (npr. sprečavanje komplikacija dijabetesa). Uključuje i rehabilitaciju.

Izvor: Jamouille & Roland (1995). Wonca dictionary 2003.

Po autorima, kvadrant gde je ranije bila kvaternarna prevencija nije prazan već su tu pacijenti koji se osećaju bolesnim a bolesti nema (medicinski neobjašnjivi simptomi, funkcionalni poremećaji, *distress* sindrom), što ih stigmatizuje i stvara funkcionalna ograničenja⁴. Jedina situacija gde se pacijent oseća bolesnim iako nema bolesti je upravo to polje (*Jamoulle*)³. Tipičan primer je pacijent sa biomedicinskim ili psihijatrijski neobjašnjivim simptomima. Prevencija bi značila da se lekar suzdrži od preduzimanja potencijalno bolnih i invazivnih testova na takvim pacijentima. Prema *Martins*-u, pacijenti u preostala tri kvadrata su takođe u riziku od prekomerne medicalizacije i njima takođe treba zaštita od nepotrebnih intervencija i upotrebe lekova⁴. Kvaternarna prevencija je odobrena 2011. God. od Evropskog udruženja lekara opšte medicine (UEMO)⁸. To nije sredstvo niti tehnika već način na koji vidimo svet i sebe kao doktora i kako medicina treba da izgleda⁹.

Cilj

Utvrditi mesto i ulogu kvaternarne prevencije u radu lekara primarne zdravstvene zaštite i izvršiti sistematski pregled literature na ovu temu.

Metod

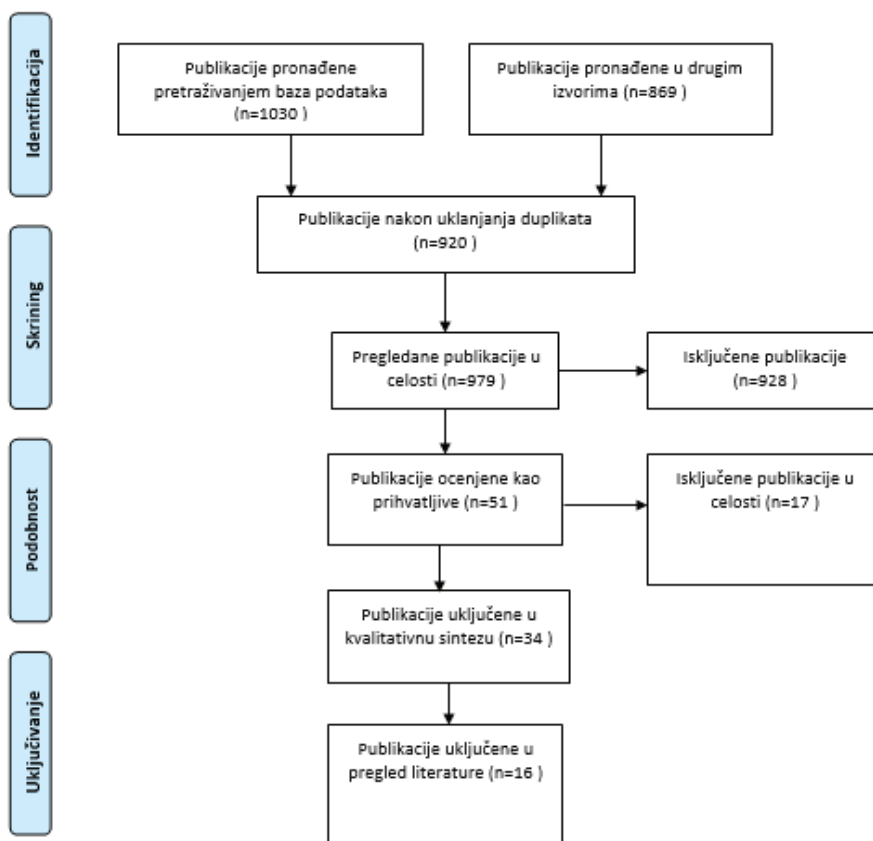
Pratili smo uputstvo PRISMA (engl. *Preferred Reporting Items for Systematic Review*) protokola o izveštavanju pregleda literature. Izbor sadržaja za pregled literature definisan je ključnim rečima iz *Medical Subject Heading (MeSH)* liste Index Medicusa za razmatranu temu analize i izbor dokumenata, kada je reč o pretraživanju međunarodnih baza podataka. Baze podataka unutar zemlje pretražene su unosom ključnih pojmova na maternjem jeziku. Prvi korak je početna probna i inicijalna pretraga radi izbora odgovarajućih dostupnih referentnih citatnih baza podataka, a zatim analiza preporučenih pojmova u naslovu, sažetku i spisku ključnih reči. Pretraga je ograničena na radove napisane na srpskom i engleskom jeziku. Kao izvor podataka na srpskom jeziku pretraga je obuhvatila baze Kobson, Scindex i Cobiss.

Drugi metodološki korak je bio preciziranje strategija kako rešiti neslaganja dva nezavisna recenzenta oko relevantnosti jedinice literature, što je prevaziđeno diskutovanjem o svakoj pojedinačnoj nedoumici oko uključivanja spornog teksta. Iz studije su isključena dokumenta koja pregledom sažetaka ili celog teksta nisu u sebi sadržala relevantne tražene informacije. Uklonjeni su lažno pozitivni rezultati. Svi rezultati pretraživanja su spojeni u jednu celinu. Kada je završeno pretraživanje pristupilo se prikupljanju radova u celini. Za obradu i analizu dobijenih podataka koristili smo metode empirijskog kvalitativnog opisa sadržaja literature koja se odnosi na utvrđeno stanje u praksi. Koristili smo prebrojavanje i procenite da prikazemo prikupljene podatke.

Rezultati

Ukupan broj pronađenih radova u bazama podataka iznosio je 1.899. Uklonjeno je 869 duplikata i 1.030 publikacija je uzeto u kriterijum za pregled u celosti. Iz studije je isključeno 979 dokumenata nakon uklanjanja duplikata. Kao irelevantne uklonili smo 928 publikacija jer nemaju fokus na temi, nisu od značaja za naše istraživanje, metodologija istraživanja nije odgovarajuća ili je nedostajao tekst u celosti. Kao prihvatljivo je ocenjeno njih 51. Iz analize je isključeno još 17 jer se u njima ne pominje primarna zdravstvena zaštita, ponavljaju se rezultati i preporuke zdravstvenim radnicima. U kvalitativnu sintezu je uključeno 34 publikacije i u našu analizu smo uključili 16 publikacija (Grafikon 2).

Grafikon 2. Protok informacija kroz različite faze pregleda literature



Analizirani su radovi objavljeni do 31. 12. 2022. godine, pretraživanjem Medline, Pubmed, Cochrane Library, Scopus, Google Scholar, Science direct, Mendeley baza

podataka, srpskih medicinskih časopisa, knjiga, strategija i doktorskih disertacija. Pretraživanje je vršeno u periodu 1. 1. 2019–31. 3. 2019, od strane dva nezavisna istraživača. Period u kom su pregledani radovi obuhvata period od 1. 9. 2022. do 31. 12. 2022. Pretraga je obuhvatila metaanalize, sistematske preglede, randomizirane kontrolne studije, kohortne i longitudinalne studije, originalne naučne radove, pregledne članke, prikaze slučajeva, pisma uredništvu, doktorske disertacije i vodiče dobre prakse. Za pretragu su korišćeni *Medical Subject Headings* (MeSH) termini *Index Medicus* liste: kvaternarna prevencija, primarna zdravstvena zaštita, porodična medicina, preterana upotreba lekova, preterana primena dijagnostičkih procedura, opšta medicina, doktori opšte medicine¹⁰. Selektovani su do sada objavljeni radovi na ovu temu. Uklonjeni su lažno pozitivni rezultati u kojima nisu korišćeni ovi termini. Rezultati pretraživanja su objedinjeni kako bi se eliminisali duplikati. Po završetku pretraživanja bibliografskih baza podataka pristupilo se prikupljanju radova u celini (*In extenso*). Potom je izvršeno pretraživanje ocena pouzdanosti i valjanosti u prikupljenim radovima korišćenjem skale *Strength of Recommendation Taxonomy*¹¹.

Koncept kvaternarne prevencije deluje kao odgovor porodičnom lekaru koji se suočava sa preteranom medikalizacijom, kao otpor, okupljanjem protiv nedostatka humanosti čitavog sektora medicine i njihove institucionalne korupcije¹². Kvaternarna prevencija uključuje potrebu za pažljivim nadzorom od strane samog doktora, neku vrstu trajne kontrole kvaliteta u ime svesti o šteti koju mogu, čak i nenamerno, učiniti svojim pacijentima. Kvaternarna prevencija podrazumeva razumevanje da se medicina temelji na odnosu, i da ovaj odnos mora ostati istinski terapijski poštujući autonomiju pacijenata i doktora. Koristi se kao okvir za višestruko repozicioniranje aktuelnih pitanja i ograničenja medicinske prakse: otkrivanje bolesti, proširenje tržišta za hiperaktivni poremećaj pažnje, transformacija simptoma u bolest, marketing osteoporoze, epidemiologiju i skrining raka dojke, sporedni problemi vezani za zdravlje, imunizacija protiv gripa i humanog papiloma virusa, marketing lekova u mentalnom zdravlju, hipertenziju ili dislipidemiju, kao i empatija i komunikacija ili uključujući i simptome medicinski neobjašnjene¹³. Teoretska osnova za razvoj koncepta kvaternarne prevencije može se primenjivati na svim nivoima zdravstvene zaštite. Međutim, njeno primarno i najvažnije mesto je u porodičnoj/opštoj medicini zbog pozicije lekara koji je prvi u kontaktu sa pacijentom i njegov vodič kroz zdravstveni sistem¹⁴.

Lekari opšte medicine se susreću sa neselektovanim pacijentima kod kojih je niska prevalenca manifestne bolesti¹⁵. Pozivaju da pri svakoj poseti pacijenta praktikuju kvaternarnu prevenciju i da budu posebno obučeni za ovu kompleksnu situaciju sa sociološkog i psihološkog stanovišta, koji su esencijalni za adherencu, promenu životnih navika i sveukupan osećaj pacijenta da ispred sebe ima lekara koji shvata njegove želje, strahove, anksioznost i poseduje mogućnost adaptacije

na potrebe svog pacijenta¹⁶. Kvaternarna prevencija se u primarnoj zdravstvenoj zaštiti odnosi na prekomernu upotrebu radioloških i rutinskih laboratorijskih pretraga, upotrebu antibiotika, neutemeljene skrininge, individualni pristup pacijentu, dobru komunikaciju, balans između pretraga i oslanjanja na medicinu zasnovanu na dokazima, rastuće opterećenje u timovima izabranih lekara sa kratkim vremenom konsultacija, što određuje brz pristanak na zahteve pacijenata. Tu su zatim bolesni pacijenti bez dijagnoze, previše zabrinuti za svoje zdravlje, pacijenti sa funkcionalnim tegobama, psihosomatskim poremećajima i neuobičajenim ponašanjem tokom bolesti.

Kvaternarna prevencija ima svoje mesto u epidemiologiji i skriningu raka dojke i prostate, imunizaciji protiv gripa i HPV, marketingu lekova u mentalnom zdravlju i osteoporozi, lečenju hipertenzije, predijabetesa i dislipidemija kao faktorima rizika bez obolevanja, programu privatnih zdravstvenih osiguranja, praktikovanju defanzivne medicine zbog straha od sankcija i upotrebi dijagnostičke tehnologije visoke rezolucije sa rizikom od prekomernih detekcija stanja koja se ne bi nikada razvila u bolest. Postoji potreba za edukacijom zdravstvenih radnika o svemu navedenom. Kvaternarna prevencija je način razmišljanja o prekomernoj upotrebi lekova, previše informacija, nepotrebnim skriningzima, prekomernom postavljanju dijagnoza, prekomernom lečenju, kao i lečenju koje bi moglo da se izbegne. Izazovi kvaternerne prevencije su bolesni pacijenti bez dijagnoze, previše zabrinuti za svoje zdravlje, teški pacijenti, pacijenti sa funkcionalnim tegobama, somatoformni poremećaji, nenormalno ponašanje tokom bolesti i lista je neograničena¹⁷.

Prekomerna definicija bolesti se odvija kroz dva mehanizma: snižavanje praga za faktor rizika bez dokaza da to pomaže ljudima da se osećaju bolje ili da žive duže i proširuje se definicija bolesti kako bi se uključili pacijenti sa dvosmislenim ili vrlo blagim simptomima. Primer snižavanja praga bi bila promena ciljne vrednosti visokog krvnog pritiska sa sistolnog od >150 do >130 za sve odrasle. Tretiranje faktora rizika kao bolesti i snižavanje praga za dijagnozu zasnovanu na faktorima rizika dramatično je povećalo prevalencu mnogih bolesti kao što je „epidemija predijabetesa”¹⁸.

Prekomerna definicija se dešava kroz dva mehanizma:

- a) snižavanje praga za faktore rizika bez dokaza da to pomaže ljudima da se osećaju bolje ili da žive duže. Nedavno je u medicinsku literaturu uvedena nova kategorija “pre-risk” (pre-hipertenzija, predijabetes);
- b) širenjem definicija bolesti kako bi se uključili pacijenti sa dvosmislenim ili vrlo blagim problemima koji se mogu bolje rešavati izvan zdravstvenog sistema.

Po definiciji, ovi „novi” pacijenti su pod manjim rizikom od onih koji su dijagnostikovani prema ranijim definicijama. Štetne posledice preterane dijagnoze zbog

prekomerne definicije potiču od označavanja i tretmana (uključujući promene u načinu života) koje malo, ako uopšte, koriste (s obzirom na nizak nivo rizika), ali koje mogu imati važne fizičke, psihološke, socijalne i finansijske posledice.

Prekomerna prodaja lekova je marketinška taktika za promovisanje prevelike definicije bolesti. Ono što karakteriše ovu oblast je da su navodne „bolesti” neprijatna iskustva koja većina ljudi povremeno ima. Na primer, većina ljudi je imala problema sa spavanjem, tugom ili težinom fokusiranja. Prekomerna prodaja lekova podrazumeva pomeranje linije koja razdvaja normalno od abnormalnog, tako da se ljudi sa blažim simptomima dijagnostikuju. Za manjinu ljudi ovi simptomi su intenzivni ili iscrpljujući, ali za većinu blagi ili kratkotrajni. Dok prvi mogu imati koristi od dijagnoze i medicinskog tretmana (u ovom primeru, za nesanicu, depresiju ili poremećaj hiperaktivnosti sa nedostatkom pažnje (ADHD), ovi drugi *neće*. Prodavanje bolesti je sinonim koji je istorijski rezervisan za širenje svesti o bolesti, što je posebno upitno i obično se planira i sprovodi da bi se prodalo više lekova (treba napomenuti da dijagnoza može pomoći ljudima sa ozbiljnijim simptomima). To je bila centralna strategija u istaknutim marketinškim kampanjama za stanja kao što je niska vrednost testosterona sa starenjem, sindrom nemirnih nogu, poremećaji ishrane, ADHD, hronična bolest suvog oka i suviše kratke trepavice kao banalan primer prethodno navedenog¹⁹. Sprečavanje prekomerne medikalizacije pacijenata ključno je područje delovanja kvaternarne prevencije. Starenje populacije i porast broja hroničnih bolesti nužno dovode do povećanja potrošnje lekova, međutim, zbog definisanja sve nižih referentnih vrednosti za pojedine parametre i sve većeg broja bolesti katkad se čini da čak i smrt i starenje postaju bolest. Uticaj farmaceutske industrije direktno preko marketinga i indirektno preko edukacije lekara neminovno dovodi do povećanog ordiniranja velikog broja lekova. Lekari opšte medicine, kao nosioci kvaternarne prevencije trebalo bi da postanu pioniri demedikalizacije. Oni mogu vratiti snagu pacijentu, podsticati i podržavati ga u brizi o sebi, apelovati na bolju i što prošireniju jednostavnu zdravstvenu zaštitu, odupirati se kategorizaciji životnih problema u smislu bolesti i pomagati u donošenju odluka o tome koje bi složene zdravstvene usluge trebalo da su dostupne. Pacijenta treba saslušati i prepoznati životne situacije koje utiču na osećaj bolesti. Ovo je moguće ako je razvijeno najjače sredstvo za ostvarivanje kvaternarne prevencije: komunikacija i poverenje pacijenata, koje se stiče tokom dugog vremena u kompleksnom odnosu lekar – pacijent, sposobnost lekara da apsorbuje, interpretira, čuje, poštuje značenje njegovih reči i odgovara na pacijentovu priču, deluje po želji i u ime pacijenta, omogućava mu da radi posao profesionalno i sa empatijom.

Prekomerna dijagnostika pretvara ljude u pacijente nepotrebno (bez jasne koristi a sa mogućom štetom) otkrivanjem problema koji nikada ne bi naškodili pacijentu ili lečenjem uobičajenih životnih iskustava. Dva su joj glavna uzroka: pre-

velika detekcija i prevelika definicija bolesti. Koji god da je uzrok posledice su iste, postavljanje dijagnoza koje nanose više štete nego koristi. Prekomerna dijagnoza je vođena idejom da će otkrivanje bolesti u ranoj fazi uvek imati povoljan uticaj na prirodni tok bolesti, ali može zapravo smanjiti kvalitet zdravstvene zaštite i ugroziti pacijente i javno zdravlje. Prekomerna dijagnoza podrazumeva nepotrebno pravljenje individua pacijentima, dijagnostikovanje problema koji nikada ne bi naneli štetu ili dovođenje u medicinske okvire običnih životnih iskustava putem proširenih definicija bolesti. Iako se oblici prekomerne dijagnoze razlikuju posledice su iste: dijagnoze koje na kraju uzrokuju više štete nego koristi. Zbunjenost oko toga šta predstavlja prekomernu dijagnozu podriva napredak ka rešenju¹⁹.

Korišćenje napredne tehnologije vodi otkrivanju akcidentalnih abnormalnosti koje nisu povezane sa pravim povodom izvođenja testa. Na primer, pri kompjuterizovanoj tomografiji pluća detektuje se adenom nadbubrežne žlezde. Epidemiološki podaci pokazuju skok ranih formi abdominalnih karcinoma i malih aortnih aneurizmi bez smanjenja u istom tom odnosu otkrivanja uznapredovalih faza bolesti ili smrtnih ishoda^{20,21}. Sofisticirana tehnologija može da donese problem kada je nivo dokaza mali da rana dijagnostika poboljšava ishod lečenja. Takav je slučaj sa tiroidnim karcinomom u Južnoj Koreji, gde je incidenca karcinoma od 1999. do 2008. povećana 6,4 puta, ali se u 95% slučajeva radilo o promenama manjim od 20 mm. Uglavnom su bili detektovani tokom skrininga i mortalitet je ostao isti²². Isto tako kompjuterizovana tomografija visoke rezolucije može da identifikuje male subsegmentalne plućne embolije koje ni ne treba lečiti²³. Kvaternarna prevencija se odnosi i na neutemeljeni skrining kakav postoji kod raka prostate.

Prekomerna detekcija bolesti je identifikacija abnormalnosti kod zdravih ljudi koje nikada ne bi izazvale klinički relevantnu bolest ili smrt bilo kroz kliničku praksu ili programe skrininga. Te abnormalnosti nikada ne bi uzrokovale štetu, ne napreduju ili napreduju suviše sporo da bi uzrokovale simptome ili bolest tokom ostatka života pacijenta ili koje spontano nestaju²⁴. Uzrok prekomernoj detekciji je povećana upotreba tehnologija samotestiranja, veća dostupnost testova i u nekim slučajevima komercijalizacija istih. Što se više testova uradi veća je i verovatnoća da se otkrije bolest^{25,26}.

Previše zdravstvene zaštite podrazumeva previše neefikasnu zdravstvenu zaštitu. Prethodni izraz, prekomerno postavljanje dijagnoza, koristio se za ograničen broj stavki i, premda je termin nastao davne 1955, još uvek ga je teško definisati na odgovarajući način²⁷. Izraz previše zdravstvene zaštite podrazumeva previše skrininga asimptomatskih individua, previše dijagnostičkih procedura kod pacijenata sa simptomima, oslanjanja na biomarkere, kvazidijagnoze i dijagnoze koje često vode u propisivanje previše lekova koji su nekada preskupi i prebrzo odobreni zbog marketinga, previše neželjenih reakcija na lekove i neodgovarajućeg monitoringa¹⁹.

Diskusija

Prevenција se može sagledati kao univerzalna (intervencije usmerene na populaciju), selektivna (intervencije usmerene na ranjive grupe) i indikovana (intervencije usmerene na pojedince)²⁸. Pet nivoa prevencije je fokusirano na studije i evaluacije unutar naučne zajednice ali se malo zna o perspektivi pacijenata. Ideja o prevenciji bolesti je atraktivna i lekaru i pacijentu. Verovanje u ranu detekciju bolesti, neke oblasti zdravstvene politike i finansijski interesi uticali su na popularnost preventivnih aktivnosti i medikalizaciju svakodnevnog života. Ekspanzija prevencije dovela je do porasta popularnosti periodičnih istraživanja zdravstvenog stanja, nazvanih sistematski kontrolni pregledi⁴.

Rastuće opterećenje u timovima izabranih lekara sa posledičnim kratkim vremenom konsultacija određuje brz pristanak na zahteve pacijenta, što je često neprikladno i može doprineti prekomernoj medicinskoj pomoći. Duže vreme konsultacija povezano je sa nizom boljih ishoda po pacijenta. Lakši način rada lekara je da saslušaju žalbu pacijenta, pretvore žalbu u dijagnozu i propišu dijagnostičku proceduru i lečenje bolesti prema zahtevu pacijenta. To je lagan način sa kojim su zdravstveni radnici dobro upoznati i koji pacijenti pozdravljaju. *Jamouille* predlaže drugačiji i više etičan pristup u odnosu lekar–pacijent u kom se slušaju pritužbe pacijenta i razumeju njegove skrivene tegobe, informišu ga sa dijagnozom i diskutuju o daljem dijagnostičkom postupku i lečenju, a zatim podele sa pacijentom odluku o tome da li preduzimati lečenje ili ne, prema doktorovom tehničkom znanju i pacijentovim etičkim vrednostima²⁹.

Medicina zasnovana na dokazima

Sackett, osnivač medicine zasnovane na dokazima, izjavio je da dobri doktori koriste i stručnost i najbolje raspoložive dokaze jer svaka sama za sebe nije dovoljna³⁰. Jedan od najboljih načina da se izbegnu nepotrebne medicinske procedure je medicina zasnovana na dokazima (*Evidence based Medicine*). Poznavanje verovatnoće koristi i štete iz kliničkih studija može nas ohrabriti da izostavimo mnoge dijagnostičke postupke i lekove u saglasnosti sa našim pacijentima. Ako se držimo zaglavljani u dihotomiji deluje/ne deluje nećemo biti u stanju da izostavimo lek koji smo ordinirali³¹. Preuzimanjem uloge na fokusiranje potencijalne jatrogene štete i zatvaranjem ciklusa moguće je preispitati sve ostale nivoe prevencije među lekarima i pacijentima. Nerealna očekivanja i prekomerni pregledi ili lečenja mogu prouzrokovati patnju. Stoga je važno promovisanje informisanog pristanka u svakoj akciji preventivne medicine pored klasične upotrebe u kurativi.

Kvaternarna prevencija je zasnovana na izbegavanju nepotrebnih medicinskih aktivnosti, poput skrininga koji su preporučeni u vodičima dobre prakse. Primer za

to je skrining na karcinom prostate. U oblasti lečenja to je, na primer, neopravdana upotreba antibiotika za infekcije gornjih disajnih puteva. U rehabilitaciji, aplikacija određenih terapijskih procedura kod nespecifičnih lumbalnih bolova, kao i preporuka fizičke aktivnosti poput plivanja i vođenja aktivnog načina života što je više to moguće kod starije populacije kod kojih zbog ograničenja fizičke aktivnosti već postoje sistemski oštećenja. *Marc Jamoulle* definiše zdravlje kao: Zdravlje je stanje otpora. To nije samo otpornost na bolesti već otpor na nasilje i uznemiravanje, droge, eksploataciju, lošu hranu, zagađenje, katastrofalne stambene uslove, farmaceutsko tržište, komercijalizaciju zdravlja i, ponekad, otpor prema samoj medicini. Mi kao zdravstveni radnici treba da podržavamo pacijente u njihovom otporu³². Izabrani/porodični lekar prvi je kontakt s pacijentom, koji sa sobom donosi anksioznost vezanu za simptome i tegobe koje ima i njegov vodič kroz zdravstveni sistem^{33,34}. Postoje situacije u kojima lekar otkriva i definiše postojanje konkretne bolesti a pacijent nema nikakvih tegoba. Primer je ponovljeni nalaz glikemije našte više od 7 mmol/L, koja upućuje na postojanje šećerne bolesti a pacijent pri tome nema nikakvih smetnji, odnosno radi se o asimptomatskoj fazi šećerne bolesti. Lekar izjavljuje i obaveštava pacijenta da ima hroničnu bolest s kojom će živeti ostatak života i da mora da promeni način života i ishrane, a pacijent, s obzirom na to da nema subjektivnih tegoba, smatra da on dalje ništa ne treba da preduzme.

Za lekara je najkompleksnija situacija kada pacijent ima brojne tegobe koje mu stvaraju teškoće i oseća se bolesnim, a ne može se naći konkretna bolest, pa time ni odrediti čime lečiti i kako pomoći pacijentu. Upravo u takvim situacijama najteže je ne preduzeti ništa. Takav je primer situacija u kojoj se susreću anksioznost pacijenta sa anksioznošću lekara. Anksioznost pacijenta proizlazi iz činjenice da ima tegobe koje nisu potvrđene pozitivnim, odnosno patološkim nalazima laboratorijskih pretraga ili kliničkim pregledom. Anksioznost lekara rezultat je osećaja neuspešnosti i nesigurnosti jer nije otkrio patološko stanje. Na to se nadovezuje pritisak pacijenta da se definiše stanje u vezi s kojim će se onda moći nešto preduzeti. Ovakve situacije završavaju na različite načine. Pacijentove tegobe lekar može definisati kao hipohondriju, preterivanje ili psihosomatski poremećaj. Ovakvi pacijenti kandidati su za upadanje u zamku (kako je autori koncepta nazivaju crnu rupu) brojnih nepotrebnih pretraga i troškova³⁴. Kandidati za kvaternarnu prevenciju upravo su pacijenti sa tegobama kojima lekar ne nalazi bolest. Neadekvatna međusobna komunikacija, prethodna izloženost pacijenta anksioznoj zdravstvenoj edukaciji (Gde ste bili do sada?), spomenuta anksioznost lekara i sve rašireniji defanzivni pristup medicini vode pacijenta na dug i iscrpljujući put sastavljen od velikog broja nepotrebnih pregleda i pretraga čiji će svi ili većina nalaza biti uredni i uglavnom neće objasniti polazne tegobe³⁵. *Martins et al.* predlažu reviziju WONCA definicije P4 i snažno podržavaju *Brodersen et al.*, koji definišu P4 kao akcije koje se preduzimaju da zaštite pojedinca od medicinskih intervencija koje bi napravile više štete nego koristi. Autori se takođe zalažu da se koncept P4 primeni

na svim nivoima prevencije^{4,18}. U svetu u kom je zdravstvena pismenost na niskom nivou način na koji treba promovisati kvaternarnu prevenciju treba da bude adekvatan. To nije panacea niti aktivnost bez zdravstvenog rizika. U nameri da se minimizuje povređivanje pacijenata postoji rizik da se izbegnu neke medicinske intervencije od kojih bi pacijent imao koristi⁴.

Kvaternarna prevencija je osetljiv koncept. Treba je naučiti, imajući u vidu da zajedno sa snagama koje nosi postoje i pretnje. Glavna pretnja je da se istraživanje u ovoj oblasti transformiše u geto ili da se politizuje. Pošto su zdravstvene usluge prošle kroz ogromnu transformaciju postajući industrija, jedna od glavnih vrednosti medicine, *primum non nocere*, postala je neka vrsta aberacije³⁶.

Zaključak

Uprkos opsežnom pregledu literature, naša studija ima određena ograničenja. Bili smo ograničeni opsegom pregleda literature. Postoje akademski radovi koji nisu dostupni na internetu. Ima analiza koje nisu objavljene. Heterogenost dizajna studija i intervencija bili su izazov za analizu detalja. Naš pregled literature bio je ograničen na srpski i engleski jezik.

Na osnovu svih dosadašnjih istraživanja, možemo zaključiti sledeće:

- Porodična/opšta medicina vođena konceptom kvaternarne prevencije je ključna u vođenju pacijenta kroz složen sistem zdravstvene zaštite.
- Detaljnim razgovorom s pacijentom, uzimajući u obzir njegovu anamnezu, životne prilike i okruženje, može se razlučiti priroda tegoba ne tražeći bolest kao njihov potencijalni uzrok.
- Lekar na osnovu pacijentovih tegoba, uzimajući u obzir potrebu, nužnost i isplativost određenog postupka, koristeći se saznanjima medicine zasnovane na dokazima, donosi odluku o tome šta treba preduzeti dalje sa pacijentom.
- Najsnažniji način da se izbegnu nepotrebne medicinske procedure je dosledna primena medicine zasnovane na dokazima.

Buduća istraživanja bi, umesto usmerenosti na bolest, trebalo da obuhvataju osnovne principe porodične/opšte medicine gde je pacijent u centru pažnje. Istraživanja treba da krenu od hipoteze da je zdravlje više nego samo odsustvo bolesti. Važne teme su one koje posmatraju kontekst složenih odnosa između pacijenata i njihovih porodičnih lekara u toku lečenja najrazličitijih zdravstvenih problema. Novi izazovi za istraživanja predstavljaju i uticaj na društvo sa različitim kulturnim normama, poštujući prava na jednakost i različitost, kao i tehnološki razvoj koji prati globalni razvoj društva.

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THE QUATERNARY PREVENTION IN THE WORK OF PRIMARY HEALTH CARE PHYSICIANS – LITERATURE REVIEW

Abstract: The concept of quaternary prevention was integrated in 1999. into the international WONCA vocabulary as actions taken to identify patients at risk of over-prescribing drugs and diagnostic procedures that would do them more harm than good. The aim was to determine the place and role of quaternary prevention in primary care. The papers published until 31.12.2022. have been analyzed. We searched Medline, PubMed, Cochrane Library, Scopus, Google Scholar, Science Direct, Mendeley, Serbian medical journals, books, strategies, and doctoral theses. The terms we used were: quaternary prevention, general medicine, over-medication, and diagnostic procedures. We restricted ourselves to works written in Serbian, English, and Croatian. Search has been performed from 01.09.2022. to 31.12.2022. Preferred Reporting Items for Systematic Review (PRISMA) scale parts were used to determine the validity of the papers collected. A total of 1899 papers were identified. We did not find meta-analyses, systematic literature reviews, and randomized studies. A total of 194 were analyzed. Highlighted as relevant 36. Quaternary prevention in primary care refers to the overuse of radiological and laboratory examinations, antibiotics, screening, individual patient access, good communication, reliance on evidence-based medicine, the workload in teams of selected doctors, and prompt consent to patient requests. Some sick patients are undiagnosed, concerned about their health, with functional problems, psychosomatic disorders, and unusual behavior during illness. Quaternary prevention has a place in breast and prostate cancer screening, immunization, mental health and osteoporosis drug marketing, hypertension, prediabetes, and dyslipidemia, a private health insurance program, and the use of high-resolution diagnostic technology.

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The most powerful way to avoid unnecessary medical procedures is to consistently apply evidence-based medicine.

Keywords: Quaternary prevention, evidence-based medicine, ethics, preventive medicine, primary healthcare.

Introduction

The concept of quaternary prevention was integrated into the international dictionary of general/family medicine by the World Organization of Family Doctors (WONCA) in 1999. It is defined as actions taken to identify patients at risk of overmedicalization, protect them from new medical invasion, and propose ethically acceptable interventions¹. The concept was proposed by Leavell and Clarke in 1948, initially based on the levels of prevention for syphilis in all its stages and later developed in the context of the doctor-patient relationship². The term “quaternary prevention” originated in Belgium in 1986, was established by Marc Jamouille, completed by Jacques Bury in 1988, and began to spread at the WONCA Congress in Hong Kong in 1995³.

Primordial prevention involves the socio-economic status of a country and its population, the level of societal awareness, knowledge, preparedness, and the functioning of the healthcare system regarding the harmfulness of certain factors on the overall health status of the population. Preventive measures are categorized into primary, secondary, and tertiary prevention. In recent years, the classification has been extended to include the concept of quaternary prevention, which refers to measures taken to protect individuals (patients) from medical interventions that may cause more harm than benefit⁴.

In primary prevention, there is no disease. Preventive measures focus on a healthy lifestyle and vaccination. In secondary prevention, certain conditions are identified as risk factors, but it is debatable whether they should be considered diseases in themselves, as they are defined by arbitrary thresholds along a continuum (hypertension, diabetes, osteoporosis, hypercholesterolemia). Additionally, early stages of diseases detected through screening are included. At this stage, we have patients who feel perfectly well except for being aware of their condition. The purpose of secondary prevention is to reduce risk factors and mitigate some of the ultimate outcomes of these conditions, such as myocardial infarction, stroke, or bone fractures. Taking a critical view, treating hypertension is prevention, even though there is no disease. The concept of risk factors is relatively new but has gained widespread popularity in a relatively short time⁵.

Most patients with risk factors will never develop the complications associated with those risks. Regardless, we label such individuals as having chronic diseases or comorbidities if they have multiple risk factors. We should not scare our patients by telling them that life itself is a risk factor for death when it is a predisposition. Risk

factors are relative. For example, we should not treat hypercholesterolemia as a risk factor in itself if the overall risk for cardiovascular disease is low, and vice versa. Another example of secondary prevention is prostate cancer screening. Most men with a prostate-specific antigen (PSA) level above 80 will have cancer, but only a few will die from it^{6,7}.

Prevention is the only point where disease and the patient's sense of illness intersect. An example can be acute myocardial infarction. Assisting the patient in managing uncertainty with all the measures available, provided that it makes sense following the patient's circumstances and will.

Among the four areas of prevention defined based on the interaction between patients and physicians, the quaternary level of prevention refers to a situation in which the patient feels ill, but the doctor concludes that no disease is present. Quaternary prevention involves activities aimed at protecting individuals from medical interventions that would cause more harm than benefit⁸. The WONCA poster on quaternary prevention from the conference in Prague in 2013 has been translated into several Asian and European languages³ (Figure 1).

Figure 1. The patient-doctor relationship arises from four types of preventive activities. The arrow indicates that P4 influences all forms of preventive activities

I Primary prevention measures to avoid or remove the cause of a disease in an individual or population before it occurs. It includes health promotion and specific protection (e.g., immunization).	II Secondary prevention detection of diseases in their early stages, facilitating treatment, reducing and preventing their spread, or mitigating their long-term effects (screening, case finding, and early diagnosis).
IV Quaternary prevention identification of patients or populations at risk of excessive medicalization, aiming to protect them from invasive medical interventions and provide them with ethically acceptable procedures.	III Tertiary prevention activities aimed at reducing the chronic effects of a health problem by minimizing functional impairment (e.g., preventing complications of diabetes). It also includes rehabilitation.



Source: Jamoulle & Roland (1995). Wonca dictionary 2003.

According to the authors, the quadrant where quaternary prevention used to be is not empty; instead, it is occupied by patients who feel ill despite the absence of disease (medically unexplained symptoms, functional disorders, distress syndrome), which stigmatizes them and creates functional limitations⁴. This is the only situation where patients feel ill even though there is no disease present (Jamouille)³. A typical example is a patient with biomedically or psychiatrically unexplained symptoms. Prevention would mean that the physician refrains from performing potentially painful and invasive tests on such patients. According to Martins, patients in the remaining three quadrants are also at risk of excessive medicalization, and they also require protection from unnecessary interventions and medication use⁴. Quaternary prevention was endorsed by the European Association of General Practitioners (UEMO) in 2011⁸. It is not a tool or technique but a way of seeing the world and ourselves as doctors and how medicine should be practiced⁹.

Objective

To determine the place and role of quaternary prevention in the work of primary healthcare physicians and conduct a systematic review of the literature on this topic.

Method

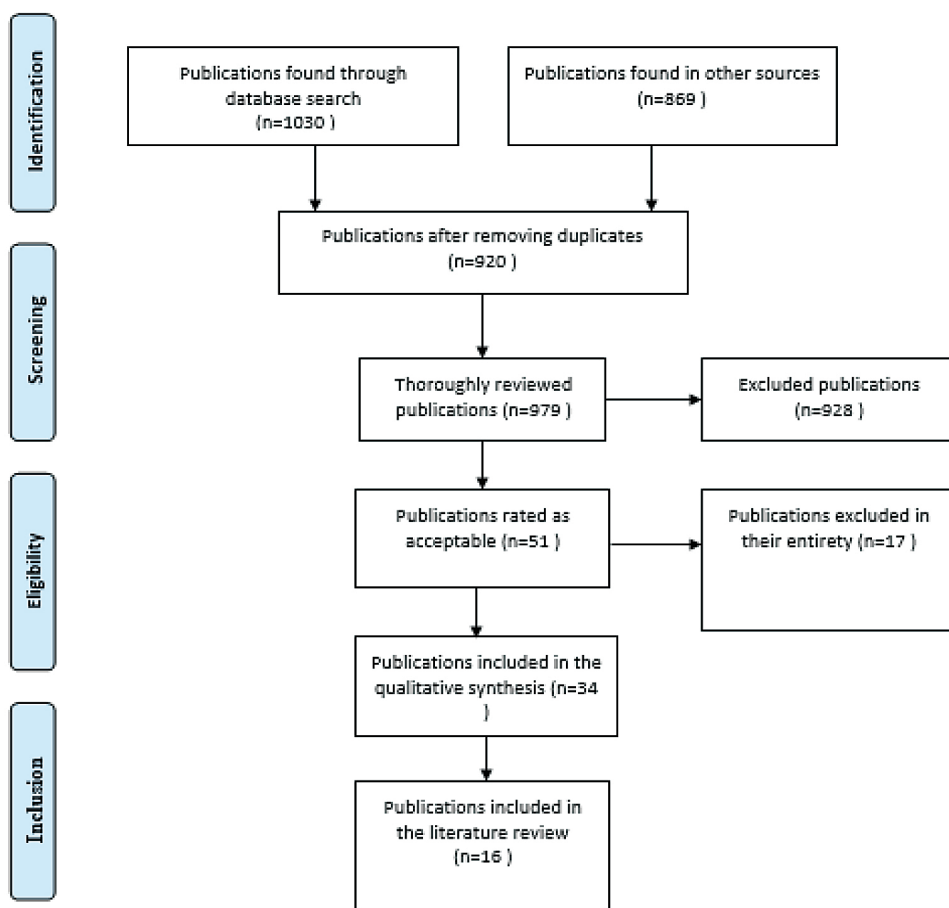
We followed the PRISMA (Preferred Reporting Items for Systematic Review) protocol guidelines for reporting literature reviews. The selection of content for the literature review was defined by using key terms from the Medical Subject Heading (MeSH) list of the Index Medicus for the analyzed topic and the selection of documents when searching international databases. Domestic databases were searched using key terms in the native language. The first step involved an initial exploratory search to select appropriate available reference citation databases, followed by an analysis of recommended terms in the title, abstract, and list of keywords. The search was limited to works written in Serbian and English. As a source of data in the Serbian language, the search included the Kobson, Scindex, and Cobiss databases.

The second methodological step involved specifying strategies to resolve disagreements between two independent reviewers regarding the relevance of literature units, which was overcome through discussions about each uncertainty regarding the inclusion of controversial texts. Documents that did not contain the relevant information sought through abstract or full-text review were excluded from the study. False-positive results were removed. All search results were merged into a single entity. Once the search was completed, the collection of full-text articles commenced. For the processing and analysis of the obtained data, we employed methods of empirical qualitative content description relating to the identified state in practice. We used counting and percentages to present the collected data.

Results

The total number of papers found in the databases was 1,899. 869 duplicates were removed, and 1,030 publications were included for full-text review. After removing duplicates, 979 documents were excluded from the study. We eliminated 928 publications as irrelevant because they did not focus on the topic, were not relevant to our research, had inappropriate research methodology, or lacked the full text. We considered 51 publications as eligible. From the analysis, an additional 17 publications were excluded as they did not mention primary healthcare, repeated previous results, or provided recommendations to healthcare professionals. 34 publications were included in the qualitative synthesis, and 16 publications were included in our analysis (Figure 2).

Figure 2. The flow of information through different stages of the literature review.



The analyzed papers were published until December 31, 2022, and were searched in Medline, PubMed, Cochrane Library, Scopus, Google Scholar, ScienceDirect, Mendeley databases, Serbian medical journals, books, strategies, and doctoral dissertations. The search was conducted from January 1, 2019, to March 31, 2019, by two independent researchers. The period during which the papers were reviewed covered September 1, 2022, to December 31, 2022. The search included meta-analyses, systematic reviews, randomized controlled trials, cohort and longitudinal studies, original scientific papers, review articles, case reports, editorials, doctoral dissertations, and practice guidelines. Medical Subject Headings (MeSH) terms from the Index Medicus list were used for the search: quaternary prevention, primary healthcare, family medicine, overuse of drugs, overuse of diagnostic procedures, general medicine, and general practitioners¹⁰. Previously published papers on this topic were selected. False positive results that did not use these terms were excluded. The search results were consolidated to eliminate duplicates. After completing the search of bibliographic databases, full-text papers (in extenso) were collected. Subsequently, the reliability and validity assessments in the collected papers were searched using the Strength of Recommendation Taxonomy scale¹¹.

The concept of quaternary prevention serves as a response from the family doctor facing overmedicalization, as a resistance, rallying against the lack of humanity within the entire medical sector, and their institutional corruption¹². Quaternary prevention entails the need for careful supervision by the physician themselves, a form of ongoing quality control in the name of awareness of the harm they can unintentionally inflict upon their patients. Quaternary prevention implies an understanding that medicine is based on a relationship and that this relationship must remain genuinely therapeutic, respecting the autonomy of patients and physicians. It is used as a framework for repositioning current issues and limitations in medical practice: disease mongering, expanding the market for attention deficit hyperactivity disorder, transforming symptoms into diseases, marketing osteoporosis, breast cancer epidemiology, and screening, health-related side problems, influenza and human papillomavirus immunization, drug marketing in mental health, hypertension or dyslipidemia, as well as empathy and communication, including medically unexplained symptoms¹³. The theoretical foundation for the development of the concept of quaternary prevention can be applied at all levels of healthcare. However, its primary and most crucial position is in family/general medicine due to the physician's role as the first point of contact with the patient and their guide through the healthcare system¹⁴.

General practitioners encounter non-selected patients with a low prevalence of manifest disease¹⁵. They advocate for practicing quaternary prevention during each patient visit and being specially trained for this complex situation from a sociological and psychological standpoint, which are essential for adherence, lifestyle changes,

and the overall sense of having a doctor who understands their desires, fears, anxiety, and can adapt to their patient's needs¹⁶. In primary healthcare, quaternary prevention relates to the excessive use of radiological and routine laboratory tests, antibiotic use, unfounded screenings, individualized patient approach, good communication, a balance between testing and evidence-based medicine, increasing workload in primary care teams with short consultation times, which determines a quick acceptance of patient demands. There are also patients without a diagnosis, overly concerned about their health, patients with functional symptoms, psychosomatic disorders, and unusual behavior during illness.

Prevention has its place in the epidemiology and screening of breast and prostate cancer, influenza and HPV immunization, marketing of mental health and osteoporosis medications, treatment of hypertension, prediabetes, and dyslipidemia as risk factors without illness manifestation, private health insurance programs, defensive medicine practice due to fear of sanctions, and the use of high-resolution diagnostic technology with the risk of excessive detection of conditions that would never progress to disease. There is a need for healthcare professionals to be educated about all of these aspects. Quaternary prevention is a way of thinking about the overuse of medications, excessive information, unnecessary screenings, overdiagnosis, overtreatment, and potentially avoidable treatment. The challenges of quaternary prevention include patients without a diagnosis, excessive health concerns, complex patients, patients with functional symptoms, somatoform disorders, abnormal behavior during illness, and the list is endless¹⁷.

The definition of disease occurs through two mechanisms: lowering the threshold for risk factors without evidence that it helps people feel better or live longer, and expanding the definition of disease to include patients with ambiguous or very mild symptoms. An example of lowering the threshold would be changing the target value for high blood pressure from systolic >150 to >130 for all adults. Treating risk factors as diseases and lowering the threshold for diagnosis based on risk factors has dramatically increased the prevalence of many conditions, such as the "prediabetes epidemic"¹⁸.

Excessive definition occurs through two mechanisms:

a) Lowering the threshold for risk factors without evidence that it helps people feel better or live longer. A new category called "pre-risk" (pre-hypertension, pre-diabetes) has recently been introduced in the medical literature.

b) Expanding the definitions of diseases to include patients with ambiguous or very mild issues that could be better managed outside the healthcare system.

By definition, these "new" patients are at lower risk than those diagnosed according to previous definitions. The harmful consequences of overdiagnosis due to excessive definition stem from labeling and treatments (including lifestyle changes)

that provide little, if any, benefit considering the low level of risk, but can have significant physical, psychological, social, and financial consequences.

The sale of drugs is a marketing tactic to promote the excessive definition of disease. What characterizes this field is that the alleged “diseases” are unpleasant experiences that most people occasionally have. For example, most people have had trouble sleeping, feeling sad, or difficulty focusing. Excessive drug sales involve shifting the line that separates normal from abnormal so that people with milder symptoms are diagnosed. For a minority of people, these symptoms are intense or debilitating, but for the majority, they are mild or transient. While the former may benefit from diagnosis and medical treatment (in this example, for insomnia, depression, or attention deficit hyperactivity disorder (ADHD)), the latter will not. Disease mongering is a term historically reserved for raising awareness about conditions, which is particularly questionable and typically planned and executed to sell more drugs (it should be noted that diagnosis can help people with more severe symptoms). This has been a central strategy in prominent marketing campaigns for conditions such as low testosterone with aging, restless leg syndrome, eating disorders, ADHD, chronic dry eye disease, and excessively short eyelashes, as a banal example of the aforementioned¹⁹. Preventing excessive medicalization of patients is a crucial area of action for quaternary prevention. The aging population and the increasing number of chronic diseases inevitably lead to increased drug consumption; however, due to the definition of lower reference values for individual parameters and the growing number of diseases, it sometimes seems that even death and aging are becoming diseases. The influence of the pharmaceutical industry, both directly through marketing and indirectly through physician education, inevitably leads to increased prescribing of a large number of drugs. General practitioners, as bearers of quaternary prevention, should become pioneers of demedicalization. They can empower patients, encourage and support them in self-care, advocate for better and more comprehensive primary healthcare, resist categorizing life issues as diseases, and help make decisions about which complex healthcare services should be available. The patient should be listened to and the life situations that influence their sense of illness should be recognized. This is possible if the most potent means of achieving quaternary prevention is developed: communication and patient trust, which are built over a long period in the complex doctor-patient relationship. The physician’s ability to absorb, interpret, listen to, respect the meaning of the patient’s words, and respond to their narrative, acting according to their wishes and on behalf of the patient, enables them to perform their job professionally and empathetically.

Diagnostic procedures unnecessarily turn people into patients without clear benefits and with potential harm by detecting problems that would never harm the

patient or by treating common life experiences. There are two main causes: overdiagnosis and over-definition of disease. Regardless of the cause, the consequences are the same, the establishment of diagnoses that do more harm than good. Overdiagnosis is driven by the idea that detecting diseases at an early stage will always have a favorable impact on the natural course of the disease, but it can reduce the quality of healthcare and compromise patients and public health. Overdiagnosis involves unnecessarily labeling individuals as patients, diagnosing problems that would never cause harm, or medicalizing ordinary life experiences through expanded definitions of disease. Although forms of overdiagnosis may vary, the consequences are the same: diagnoses that ultimately cause more harm than good. Confusion about what constitutes overdiagnosis undermines progress towards a solution¹⁹.

The use of advanced technology leads to the detection of incidental abnormalities that are unrelated to the true purpose of the test. For example, the adrenal adenoma can be detected during computed tomography of the lungs. Epidemiological data show a surge in early-stage abdominal cancers and small aortic aneurysms without a corresponding decrease in the detection of advanced stages of the disease or mortality outcomes^{20,21}. Sophisticated technology can pose a problem when the level of evidence is low that early diagnosis improves treatment outcomes. Such is the case with thyroid cancer in South Korea, where the incidence of cancer increased 6.4 times from 1999 to 2008, but 95% of cases involved changes smaller than 20 mm. They were mostly detected during screening, and mortality remained the same²². Similarly, high-resolution computed tomography can identify small subsegmental pulmonary embolisms that do not require treatment²³. Quaternary prevention also refers to unjustified screening, such as in the case of prostate cancer.

Disease detection is the identification of abnormalities in healthy individuals that would never cause clinically relevant illness or death, either through clinical practice or screening programs. These abnormalities would never cause harm, do not progress or progress too slowly to cause symptoms or disease throughout the patient's remaining lifetime, or spontaneously disappear²⁴. The cause of over-detection is the increased use of self-testing technologies, greater availability of tests, and, in some cases, commercialization of the same. The more tests are performed, the higher the probability of detecting a disease^{25,26}.

Too much healthcare implies excessively inefficient healthcare. The previous term, overdiagnosis, has been used for a limited number of conditions, and although the term originated back in 1955, it is still challenging to define it appropriately²⁷. The term too much healthcare encompasses excessive screening of asymptomatic individuals, excessive diagnostic procedures in patients with symptoms, reliance on biomarkers, pseudo-diagnoses, and diagnoses that often lead to prescribing too many medications, some of which are excessively expensive and quickly approved due to marketing, excessive adverse drug reactions, and inadequate monitoring¹⁹.

Discussion

Prevention can be viewed as universal (population-based interventions), selective (interventions targeted at vulnerable groups), and indicated (interventions targeted at individuals)²⁸. The five levels of prevention have been the focus of studies and evaluations within the scientific community, but little is known about the patient's perspective. The concept of disease prevention is appealing to both physicians and patients. Belief in early disease detection, certain areas of health policy, and financial interests have influenced the popularity of preventive activities and the medicalization of everyday life. The expansion of prevention has led to an increase in the popularity of periodic health examinations, known as routine check-ups⁴.

The growing burden on primary care teams, coupled with short consultation times, often results in physicians quickly acquiescing to patient demands, which can be inappropriate and contribute to excessive medical care. Longer consultation times have been associated with a range of better patient outcomes. A simpler way for physicians to work is to listen to the patient's complaint, convert it into a diagnosis, and prescribe diagnostic procedures and treatment for the requested illness. This is an easy approach that healthcare professionals are familiar with and that patients appreciate. Jamouille proposes a different and more ethical approach to the physician-patient relationship, in which the patient's complaints are listened to and their hidden concerns understood, they are informed about the diagnosis, and the further diagnostic process and treatment are discussed. Then, a shared decision is made with the patient about whether to proceed with treatment or not, based on the doctor's technical knowledge and the patient's ethical values²⁹.

Evidence-Based Medicine

Sackett, the founder of evidence-based medicine, stated that good doctors use both expertise and the best available evidence because each alone is not sufficient³⁰. One of the best ways to avoid unnecessary medical procedures is through evidence-based medicine. Understanding the probabilities of benefits and harms from clinical studies can encourage us to omit many diagnostic procedures and medications in line with our patient's preferences. If we remain trapped in the dichotomy of works/doesn't work, we won't be able to omit a drug we prescribed³¹. By taking on the role of focusing on potential iatrogenic harm and closing the cycle, it is possible to reassess all other levels of prevention among physicians and patients. Unrealistic expectations and excessive screenings or treatments can cause suffering. Therefore, promoting informed consent in every preventive medicine action is important, in addition to its traditional use in curative care.

Prevention is based on avoiding unnecessary medical activities, such as screenings recommended in good practice guidelines. An example of this is prostate cancer screening. In the realm of treatment, it can be the unjustified use of antibiotics for upper respiratory tract infections. In rehabilitation, it involves the application of specific therapeutic procedures for nonspecific low back pain, as well as recommending physical activity such as swimming and maintaining an active lifestyle as much as possible in the elderly population, who may already have systemic impairments due to limited physical activity. Marc Jamouille defines health as Health is a state of resistance. It is not just resistance to diseases but resistance to violence and harassment, drugs, exploitation, poor nutrition, pollution, catastrophic housing conditions, the pharmaceutical market, the commercialization of health, and sometimes resistance to medicine itself. As healthcare professionals, we should support patients in their resistance³². The primary care/family doctor is the first point of contact with the patient, who brings with them anxiety related to their symptoms and complaints and serves as their guide through the healthcare system^{33,34}. There are situations where the doctor discovers and defines the presence of a specific disease while the patient has no symptoms. An example is a repeated fasting blood glucose level above 7 mmol/L, which indicates the presence of diabetes, but the patient has no complaints, meaning it is an asymptomatic phase of diabetes. The doctor declares and informs the patient that they have a chronic disease they will live with for the rest of their life and that they need to change their lifestyle and diet. However, the patient, having no subjective symptoms, may believe they don't need to take any further action.

For a doctor, the most complex situation arises when a patient has numerous complaints that cause difficulties and feelings of illness, yet no specific disease can be identified, making it challenging to determine the appropriate treatment and how to help the patient. In such situations, it is particularly difficult not to take any action. This is exemplified by situations in which the patient's anxiety aligns with the doctor's anxiety. The patient's anxiety stems from experiencing symptoms that have not been confirmed by positive pathological findings from laboratory tests or clinical examinations. The doctor's anxiety results from feelings of failure and uncertainty due to not identifying a pathological condition. Additionally, there is pressure from the patient to define the condition so that something can be done about it. These situations can have different outcomes. The doctor may classify the patient's symptoms as hypochondria, exaggeration, or a psychosomatic disorder. Such patients are prone to falling into the trap (referred to as the "black hole" by the concept's authors) of undergoing numerous unnecessary tests and incurring costs³⁴. Patients experiencing symptoms for which the doctor cannot find a disease are candidates for quaternary prevention. Inadequate communication between the doctor and patient, the patient's previous exposure to anxiety-inducing health education

(“Where have you been until now?”), the aforementioned anxiety of the doctor, and the increasingly defensive approach in medicine all lead the patient down a long and exhausting path consisting of a large number of unnecessary examinations and tests, most of which will yield normal results and generally fail to explain the initial complaints³⁵. Martins et al. propose a revision of the WONCA definition of P4 and strongly support Brodersen et al., who define P4 as actions taken to protect individuals from medical interventions that would do more harm than good. The authors also advocate for applying the P4 concept to all levels of prevention^{4,18}. In a world where health literacy is low, the promotion of quaternary prevention needs to be appropriate. It is not a panacea nor an activity without health risks. In the effort to minimize harm to patients, there is a risk of avoiding some medical interventions from which the patient could benefit⁴.

Quaternary prevention is a sensitive concept. It needs to be learned while keeping in mind that, along with its strengths, there are also threats. The main threat is the possibility of research in this field turning into a ghetto or becoming politicized. As healthcare services have undergone a significant transformation, becoming an industry, one of the main values of medicine, “*primum non nocere*,” has become somewhat of an aberration³⁶.

Conclusion

Despite an extensive review of the literature, our study has certain limitations. We were constrained by the scope of the literature review. There are academic papers that are not available online. There are unpublished analyses. The heterogeneity of study designs and interventions posed a challenge for detailed analysis. Our literature review was limited to the Serbian and English languages.

Based on all the existing research, we can draw the following conclusions:

- Family/general medicine guided by the concept of quaternary prevention is crucial in guiding patients through the complex healthcare system.
- Through detailed patient interviews, taking into account their medical history, life circumstances, and environment, the nature of their complaints can be discerned without necessarily seeking a disease as their potential cause.
- Based on the patient’s complaints and considering the necessity, relevance, and cost-effectiveness of specific interventions, doctors, using evidence-based medicine, make decisions on further steps to be taken with the patient.
- Consistent implementation of evidence-based medicine is the most powerful way to avoid unnecessary medical procedures.

Future research should shift its focus from disease-oriented approaches to the fundamental principles of family/general medicine, where the patient is at the center of attention. Research should start with the hypothesis that health is more than just the absence of disease. Important topics include examining the complex relationships between patients and their family doctors during the treatment of various health problems. New challenges for research include the impact on society with diverse cultural norms, respecting rights to equality and diversity, as well as technological advancements accompanying global societal development.

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